Statistical Bulletin

METROPOLITAN LIFE INSURANCE COMPANY

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The Hazardous First Month of Life*

ABOUT 78,000 babies under 1 month of age die in the course of a year in the United States—well over twice the number who succumb during the remaining 11 months of infancy. Life is particularly hazardous for the newborn. One third of all deaths in the first year of life happen on the day of birth; three fifths of the infant deaths occur in the first week. If the number of deaths on the day of birth were to continue for the first 100 days, no infant would survive beyond that time.

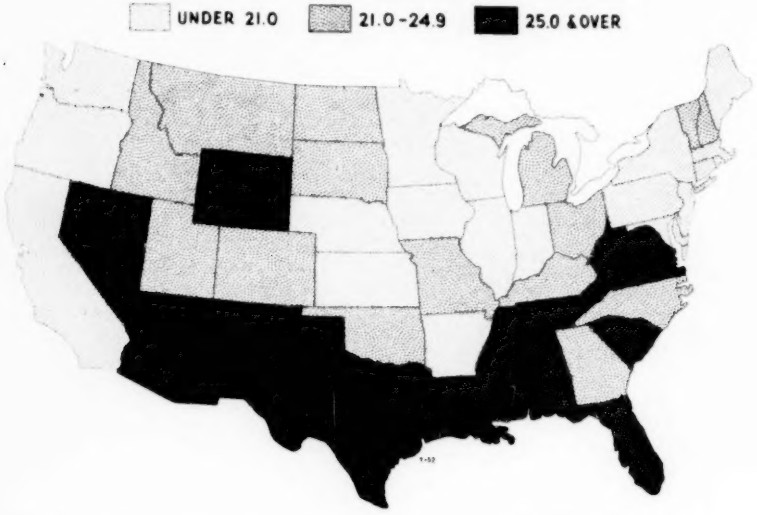
More and more, the mortality among babies has become concentrated in the early days of life. For example, the proportion of infant deaths occurring in the first month rose from 44 percent in 1915 to 70 percent in 1948, the latest year for which data are available. The proportion of deaths in the first 24 hours of life increased even more rapidly in this period—from 15 to 33 percent. This is not to say that the death rate among the newborn has been rising. On the contrary, considerable progress has been made in reducing the mortality at these early ages. It simply means that the improvement has not been as rapid among the newborn as in later infancy. Among babies under 1 day of age, the death rate dropped nearly one third between 1915 and 1948; under age 1 month the rate has been cut exactly in half. At the same time, the death rate at ages 1-11 months fell more than four fifths. This difference in the trend by age reflects the greater progress made in the control of the diseases which have their origin in the postnatal environment than in the control of abnormal conditions or influences which may exist at or prior to birth.

The reductions that have already been effected in neonatal mortality (the death rate within the first month) are encouraging, but much more remains to be accomplished. This is particularly true for nonwhite babies, who experience higher death rates than the white in every region of the country. In the United States as a whole, the neonatal mortality among the nonwhite is higher by nearly 40 percent. In the first

*An exhibit on neonatal mortality, prepared by the Statistical Bureau of the Company, will be displayed at the Fifth American Congress on Obstetrics and Gynecology, to be held in Cincinnati, Ohio, March 31 to April 4. Physicians attending the Congress are cordially invited to visit our booth.

Chart 1—Geographic Variation in Neonatal Mortality

Deaths Under 1 Month of Age per 1,000 Live Births, United States, 1948



three days the excess mortality is about 25 percent, while in the remainder of the first month, when environmental factors play a greater role, the rate is nearly 80 percent higher for the nonwhite babies. This segment of our population provides a rich field for reducing the toll of preventable death in early life.

The hazards of the first days of life are accentuated by the fact that not far from half a million babies do not have hospital care at birth. Of this number about 180,000 are delivered by midwives and thus do not have the benefit of a physician's services. Although the proportion of hospitalized births has increased markedly in fairly recent years, there is still considerable room for further progress, especially in the nonwhite population. Little more than half the nonwhite births in our country are delivered in hospitals, compared with over 90 percent of the white babies. In Mississippi and South Carolina, less than 20 percent of the nonwhite births are hospitalized, while about 60 percent are delivered by midwives.

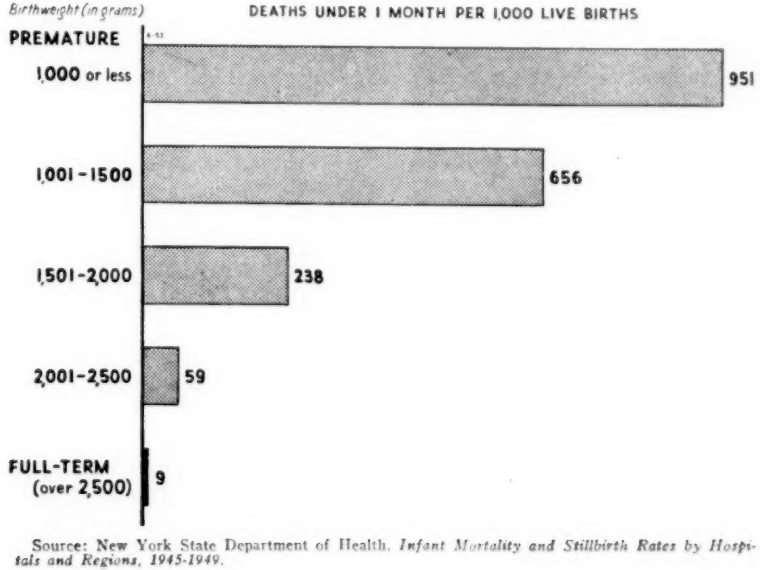
In view of the foregoing facts, it is not surprising that the South and the Southwest have the highest neonatal death rates in the country. All the 13 States which had rates of 25 or more per 1,000 live births in 1948 are in the Southern and Mountain States (see accompanying map). In New Mexico, for example, the neonatal death rate was 32.9 per 1,000 live births, and in Nevada it was 31.9; these figures compare with

the national average of 22.2 per 1,000 and with 18.8 in Connecticut. If the neonatal mortality in the country as a whole were the same as that in Connecticut, about 12,000 lives would be saved each year.

Premature birth is by a considerable margin the largest single factor in neonatal mortality, accounting for about one half of all the deaths among babies under 1 month of age. A majority of the other deaths are reported as due to injury at birth or congenital malformation. A study in New York State for the period 1945-1949 showed that the neonatal death rate among prematurely born children is about 25 times the rate among full-term births. Although less than 7 percent of births are premature, the mortality rate among them is so high that they contribute nearly 65 percent of all deaths in the first month of life.

The chances of survival for a prematurely born baby are directly related to its degree of maturity, as measured by birthweight (see Chart 2). Death rates are extremely high among the lightest weight groups. Thus, of the babies who weigh 1,000 grams or less (2 pounds 3 ounces or less) at birth, 95 percent die in the first month of life, according to the New York State study. The mortality decreases progressively, however, with the more mature development of the fetus. For babies in the

Chart 2—Neonatal Mortality by Birthweight
New York State Exclusive of New York City, 1945-1949



Source: New York State Department of Health. *Infant Mortality and Stillbirth Rates by Hospitals and Regions, 1945-1949.*

2,001-2,500 gram class at birth, the neonatal mortality was 6 percent. Full-term children — those over 2,500 grams (over 5½ pounds)— had a death rate of less than 1 percent. Obviously, the challenging problem of the heavy death toll among premature babies should have special attention in the program to reduce neonatal mortality. In recent years, special medical and nursing care of such infants has been increased in a number of communities throughout the country. The next decade will undoubtedly witness a wide expansion of such services.

There is good reason to expect further improvement in neonatal mortality as measures which have already proved effective in conserving life among the newborn are more widely used, and as additional advances in knowledge are made and put into practice.

Punishment for Murder

EACH year about 7,500 cases of murder or nonnegligent manslaughter are reported to local police authorities in the United States, according to information compiled by the Department of Justice. The actual number of such killings is undoubtedly even larger than this figure indicates, since it does not include undetected slayings, which may be listed in the official records as accidents, suicides, or as deaths of unknown origin. This considerable loss of life constitutes one of our important social problems.

Arrests are made in about 9 out of every 10 cases of murder or nonnegligent manslaughter, a higher ratio than for any other serious crime. Some of those arrested are dismissed at preliminary examinations. In addition, about one fifth of those whose cases come before felony courts on a murder charge are released for lack of sufficient evidence or for other reasons.* Another one fifth are acquitted by the court or the jury, while the remaining three fifths are convicted.

Of those convicted of murder, only about 5 percent are sentenced to death (see Table 1). Most of the sentences—70 percent—range from 20 years to life. About 3 percent are sent to prison for terms of less than five years. These figures relate only to men, comparable data not being available for women; however, this deficiency is of minor consequence, since men imprisoned for murder outnumber women 13 to 1.

The sentences actually served are much shorter than those pronounced, as is evident from the right-hand panel of Table 1. Of the men imprisoned for murder who were released in the period 1944-1946 (the latest data available), barely 6 percent had served 20 years or more. Almost one quarter were in prison less than five years before they were released. However, the difference

*Facts on the disposition of the defendants are not available for the country as a whole, but the data on this point, published by the Department of Justice and the Bureau of the Census, relate to a large part of the population.

TABLE 1—SENTENCES FOR MURDER AND LENGTH OF TIME SERVED BY THOSE RELEASED; MALE PRISONERS IN STATE AND FEDERAL PENAL INSTITUTIONS, UNITED STATES,* 1944-1946

LENGTH OF SENTENCE; TIME SERVED	SENTENCED		RELEASED	
	NUMBER	PERCENT	NUMBER	PERCENT
Total	4,324	100.0	4,945	100.0
Death	201	4.6	—	—
20 years and over	3,013	69.7	281	5.7
5-19 years	968	22.4	3,527	71.3
Under 5 years	142	3.3	1,137	23.0

*Excludes data for Mississippi, 1944-1946, and for Georgia and Mississippi, 1944-1945.

Source of basic data: Bureau of the Census, *Prisoners in State and Federal Prisons and Reformatories.*

TABLE 2— LEGAL EXECUTIONS FOR MURDER AND RATE PER 1,000,000 POPULATION,* UNITED STATES BY GEOGRAPHIC DIVISION AND STATE, 1941-1948

Geographic Division and State	Number	Rate Per 1,000,000	Geographic Division and State	Number	Rate Per 1,000,000	Geographic Division and State	Number	Rate Per 1,000,000
UNITED STATES	851†	0.8	West North Central	22	0.2	West South Central	109	1.1
New England	18	.3	Minnesota‡	0	0	Arkansas	25	1.8
Maine‡	0	0	Iowa	5	.3	Louisiana	34	1.8
New Hampshire	0	0	Missouri	9	.3	Oklahoma	9	.6
Vermont	1	.4	North Dakota‡	0	0	Texas	41	.8
Massachusetts	9	.3	South Dakota	1	.2			
Rhode Island‡	0	0	Nebraska	2	.2			
Connecticut	8	.5	Kansas	5	.4			
			South Atlantic	287	1.9	Mountain	34	1.0
			Delaware	1	.4	Montana	1	.3
Middle Atlantic	128	.6	Maryland	19	1.1	Idaho	0	0
New York	87	.8	Dist. of Col.	11	1.7	Wyoming	2	1.0
New Jersey	11	.3	Virginia	23	1.0	Colorado	11	1.2
Pennsylvania	30	.4	West Virginia	8	.5	New Mexico	2	.5
			North Carolina	69	2.4	Arizona	8	1.7
			South Carolina	29	2.0	Utah	4	.8
East North Central	49	.2	Georgia	86	3.5	Nevada	6	5.6
			Florida	41	2.3			
Ohio	34	.6	East South Central	116	1.4	Pacific	84	.9
Indiana	4	.1	Kentucky	23	1.1	Washington	11	.7
Illinois	11	.2	Tennessee	21	.9	Oregon	11	1.1
Michigan‡	0	0	Alabama	26	1.2	California	62	.9
Wisconsin‡	0	0	Mississippi	46	2.8			

*Excluding executions in military installations.

†Includes 4 Federal cases in 1948 not allocated to the individual States.

‡Does not have the death penalty.

Source of basic data: Reports of Bureau of the Census and the Department of Justice.

between the sentences imposed and those served is not quite as wide as appears on the surface. The figures on those released obviously do not take into account those who serve full life sentences, data for which are not available. Moreover, the major proportion of those released before serving their full term are freed conditionally, generally on parole. The prisoners released conditionally in 1944-1946 had actually served more time than those released at the expiration of their prison terms.

Capital punishment, as already noted, is meted out infrequently. In the eight-year period for which data are available, 1941-1948, there were 851 legal executions for murder in the United States, or an annual average of 0.8 per 1,000,000 population (exclusive of executions in military installations). It will be seen in Table 2 that the geographic differences are striking. The southern and southwestern areas in general have the highest rates and the Midwest the lowest.

Accidental Falls From Windows

ACCIDENTAL falls out of windows are responsible for approximately 500 deaths a year in the United States. An insight into the circumstances under which such mishaps occur is provided by the death claim records of 181 Metropolitan Life Insurance Company Industrial policyholders who died in such accidents in the years 1947-1950. Approximately four fifths of the fatalities in this essentially urban experience were sustained in the home. The remainder occurred in various other places, such as hospitals, office buildings, department stores, and industrial plants. The majority of fatal injuries outside the home happened in the course of gainful employment, for the most part among professional window cleaners, janitors, and porters about buildings. A few of the victims were delirious patients in hospitals.

Since most fatal falls out of windows are in the home, the following discussion is limited to such accidents. Mishaps of this type occur in every month of the year, but they are most frequent in the summer, when windows are most likely to be open. Youngsters are particularly exposed to this hazard in the warm season; in this study, 11 out of the 16 children under age 15 lost their lives within the three months June through August. Ten of the children involved in these summer accidents were 3 years of age or younger, which underscores the hazard of leaving toddlers unsupervised near open windows. In at least three instances, preschool children were killed when they climbed upon some object near an open window. Two infants, one of 7 months and the other 10 months, fell to their death after having been placed on beds adjacent to windows.

This insurance experience indicates that the toll taken by falls from windows among children of school

age is smaller than that among younger children. In the four-year period under review, there were only three lives lost—all boys—in falls from windows in the age group 5-14 years.

By far the largest number of deaths in falls from windows are among adults. In this study, nine tenths of the victims were 15 years of age or over, most of them in the ages past 45. Accidental falls among adults are brought about by a wide variety of circumstances. Twelve of the fatally injured were engaged in washing windows; some of these victims momentarily lost their balance when the window jammed and could not be moved. One person was killed when a window box on which she was sitting gave way. In another instance, a heavy-set woman fell to her death as a worn window frame which she was holding to steady herself tore loose. It is obviously a dangerous practice to sit or to stand on window sills.

Many chores around the house other than washing windows can end tragically if proper caution is not exercised. These include the repair of windows or awnings, the installation of screens, hanging clothes out to dry or taking them in, and shaking a rug out of a window. Several policyholders plunged to their death because they leaned out too far to see some person or object. Merely opening or closing a window is not without risk, especially when the one doing it is not fully awake. In some instances, people sleeping away from home apparently mistook window locations for doors. Two persons fell to their death while sleep walking. A number of these mishaps might have been avoided had the window sills not been so low.

In about one fourth of the fatalities among grownups, dizzy spells, epileptic seizures, or other illnesses were reported as possible contributory factors. Intoxication was mentioned in nearly one fifth of the deaths among adults, almost all of them males. This and the fact that men are more apt to do the more hazardous chores around windows probably account for the much higher death toll among men than among women.

It is apparent that greater attention needs to be directed to the hazards that attend various types of activity around windows. If care were taken more generally to avoid the dangerous practices here cited, many lives would be saved each year.

Recent Movement to Large Population Centers

THE most populous metropolitan areas—that is, the large cities and their surrounding territory—continue to attract many new residents. At the census of April 1, 1950, more than 3,250,000 people, or 5 percent of the population living in the 57 large metropolitan areas of the country, reported that they had moved from another county during the preceding 12 months.

The migration rate varied widely

NUMBER OF PERSONS PER 1,000 POPULATION, AGES 1 AND OVER, LIVING IN SELECTED STANDARD METROPOLITAN AREAS* ON APRIL 1, 1950, WHO CHANGED COUNTY OF RESIDENCE SINCE APRIL 1, 1949

STANDARD METROPOLITAN AREA	MI-GRANTS PER 1,000
New England	
Boston, Mass.	44
City	44
Suburbs	44
Springfield-Holyoke, Mass.	37
Worcester, Mass.	19
Providence, R. I.	31
City	30
Suburbs	31
Hartford, Conn.	38
Middle Atlantic	
Albany-Schenectady-Troy, N. Y.	44
Buffalo, N. Y.	27
City	22
Suburbs	33
New York-Northeastern N.J.	41
New York portion	42
New York City	34
Suburbs in N. Y.	77
New Jersey portion	37
Newark	24
Jersey City	18
Suburbs in N. J.	42
Rochester, N. Y.	29
City	31
Suburbs	26
Syracuse, N. Y.	50
Utica-Rome, N. Y.	28
Allentown-Bethlehem, Pa.	36
Harrisburg, Pa.	62
Johnstown, Pa.	21
Philadelphia, Pa.	32
City	19
Suburbs	48
Pittsburgh, Pa.	25
City	23
Suburbs	25
Scranton, Pa.	17
Wilkes-Barre-Hazleton, Pa.	19
East North Central	
Akron, Ohio	34
Cincinnati, Ohio	39
City	43
Suburbs	35
Cleveland, Ohio	30
City	27
Suburbs	36
Columbus, Ohio	57
City	59
Suburbs	50
Dayton, Ohio	61
Toledo, Ohio	33
City	36
Suburbs	22
Youngstown, Ohio	35
Indianapolis, Ind.	49
City	45
Suburbs	65
Chicago, Ill.	33
City	25
Suburbs	48
Detroit, Mich.	57
City	34
Suburbs	93
Milwaukee, Wis.	30
City	30
Suburbs	31
West North Central	
Duluth, Minn.-Superior, Wis.	40
Minneapolis-St. Paul, Minn.	57
Minneapolis	57
St. Paul	47
Suburbs	69
Kansas City, Mo.	73
City	70
Suburbs	77
St. Louis, Mo.	46
City	33
Suburbs	60
Omaha, Nebr.	63
South Atlantic	
Baltimore, Md.	41
City	34
Suburbs	56
Washington, D. C.	155
White	187
Nonwhite	47
City	70
White	87
Nonwhite	34
Suburbs	259
White	277
Nonwhite	97
Norfolk-Portsmouth, Va.	106
White	130
Nonwhite	33
Richmond, Va.	76
White	89
Nonwhite	44
Charleston, W. Va.	42
Wheeling, W. Va.-Steubenville, Ohio	37
Atlanta, Ga.	88
White	109
Nonwhite	29
City	60
White	81
Nonwhite	30
Suburbs	115
White	126
Nonwhite	27
Miami, Fla.	113
Tampa-St. Petersburg, Fla.	102
East South Central	
Louisville, Ky.	68
City	46
Suburbs	107
Nashville, Tenn.	73
White	83
Nonwhite	35
Memphis, Tenn.	89
White	113
Nonwhite	42
City	67
White	81
Nonwhite	42
Suburbs	189
White	236
Nonwhite	43
Birmingham, Ala.	51
White	66
Nonwhite	25
West South Central	
New Orleans, La.	47
White	55
Nonwhite	31
City	32
White	39
Nonwhite	21
Suburbs	119
White	124
Nonwhite	104
Dallas, Texas	85
City	90
Suburbs	74
Houston, Texas	68
City	73
Suburbs	53
San Antonio, Texas	71
City	75
Suburbs	54
Mountain and Pacific	
Denver, Colo.	122
City	90
Suburbs	214
Seattle, Wash.	71
City	69
Suburbs	76
Portland, Oreg.	88
City	78
Suburbs	99
Los Angeles, Calif.	56
City	55
Suburbs	58
San Diego, Calif.	104
San Francisco-Oakland, Calif.	89
San Francisco	68
Oakland	59
Suburbs	115

*Standard metropolitan areas with populations of 250,000 or more in 1940.

NOTE: These rates are based on a sample of census returns and are subject to sampling variation.

Source of basic data: Bureau of the Census, *Characteristics of Standard Metropolitan Areas*, Series PC-5.

among the leading population centers, as may be seen from the table on page 8. In general, the metropolitan areas of the South and West had the highest migration rates, undoubtedly a result of the rapid development of the resources and industries of these regions, while the areas in the North had the lowest rates. The minimum rate, 17 per 1,000 population, was experienced in Scranton, Pa., and the highest, 155, in Washington, D. C. Other metropolitan areas in which new residents constituted at least 10 percent of the population in 1950 were Denver, Miami, Norfolk-Portsmouth, San Diego, and Tampa-St. Petersburg. The figures shown here include members of the armed forces, a situation which naturally tends to swell the proportion of migrants in areas where large numbers of service men are stationed.

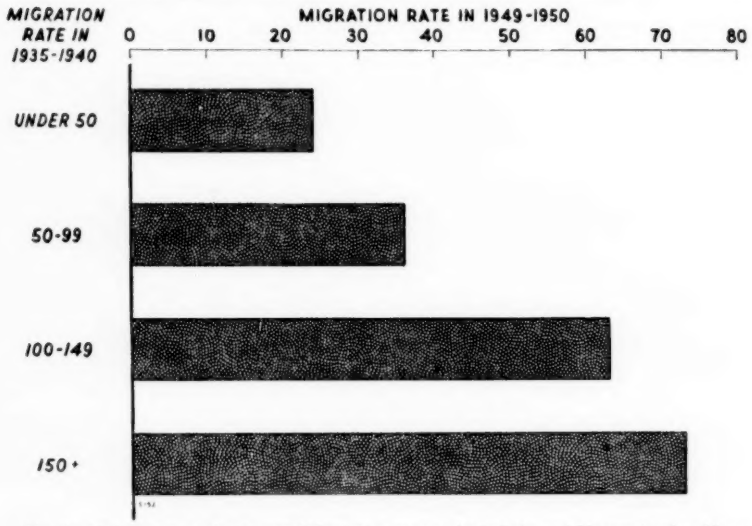
The most heavily populated area in the country, the New York-Northeastern New Jersey metropolitan area, which contains almost 13,000,000 residents, experienced a migration rate between 1949 and 1950 that was somewhat smaller than average—namely, 41 per 1,000. Of the next four most populated areas, Los Angeles and Detroit had appreciably higher migration rates, but Chicago and Philadelphia fell below New York.

Suburban areas, which have been growing much more rapidly than the country as a whole, generally had higher migration rates than the cities they surround. In the 32 metropolitan areas for which such data are available, the migration rate in the suburbs was 65 per 1,000, compared with 41 in the central cities. In some places the contrast was very marked. In Washington, D. C., for example, the migration rate in the areas surrounding the city was 259 per 1,000 as against 70 in the District itself. Other metropolitan areas which had much higher rates in the suburbs than in the cities were New Orleans, Memphis, Detroit, and Philadelphia. These high rates of migration to suburban areas reflect, in part, the decentralization of our large cities. With modern transportation facilities and mushrooming housing developments, people are no longer forced to live in crowded cities even though they may work in them. In only a few metropolitan areas, largely in Ohio and Texas, was migration to the central city greater than to the suburbs.

Data separately for whites and nonwhites are available for eight of the large metropolitan areas, all of them in the South. In each of these areas the 1949-1950 migration rate of the nonwhite population was considerably lower than that for white persons; for the eight areas in the aggregate, the rates in the two groups were 36 and 121 per 1,000, respectively. The details appear in the table.

Surprisingly enough, the general pattern of migration into the large central cities in 1949-1950 was quite similar to that in the period 1935-1940, the only earlier period for which comparable data are available. Where recent migration rates have

Migrants in 1949-1950 per 1,000 Population to 36 Selected Cities Grouped According to Their Migration Rates in 1935-1940*



*In the 1940 Census a migrant was defined as a person who had changed his county of residence since 1935. The 1935-1940 migration rates relate to a five-year period and are therefore considerably larger than those for the one year 1949-1950.

been high, they were also high in the earlier years; the high correlation between the rates for the two periods can be seen in the accompanying chart. One might have expected the general pattern of urban migration to change with the marked social and economic changes that have occurred since the depression period. However, the persistence of the older pattern of movement to large population centers points to the continued influence of long-term forces.

DEATH RATES* PER 100,000 POLICYHOLDERS FROM SELECTED CAUSES
INDUSTRIAL PREMIUM-PAYING BUSINESS, *Weekly and Monthly Combined*
METROPOLITAN LIFE INSURANCE COMPANY

JANUARY 1952

CAUSE OF DEATH	ANNUAL RATE* PER 100,000 POLICYHOLDERS				
	JANUARY			YEAR	
	1952	1951	1950	1951	1950
ALL CAUSES—TOTAL	736.1	688.2	698.4	649.7	638.7
Tuberculosis (all forms)	17.9	17.2	23.3	17.6	20.7
Tuberculosis of respiratory system	16.6	15.8	21.1	16.0	18.7
Syphilis	2.4	4.9	3.6	3.6	4.1
Communicable diseases of childhood	.7	.5	.8	.5	.6
Acute poliomyelitis	.4	.2	.4	.8	1.0
Malignant neoplasms	128.3	118.2	118.8	120.8	120.7
Diabetes mellitus	13.7	15.6	14.7	14.8	15.5
Diseases of the cardiovascular-renal system	382.1	357.6	356.6	330.0	328.5
Vascular lesions, central nervous system	79.9	69.0	69.4	64.5	64.1
Diseases of heart	276.5	263.3	259.0	240.7	238.8
Chronic rheumatic heart disease	14.2	14.9	14.5	13.4	13.5
Arteriosclerotic and degenerative heart disease	203.4	191.5	181.6	175.0	171.7
Hypertension with heart disease	47.5	44.6	54.5	41.7	43.8
Other diseases of heart	11.4	12.3	8.4	10.6	9.8
Hypertension without mention of heart	5.8	5.2	7.3	6.3	6.5
General arteriosclerosis	6.9	7.1	8.1	6.2	6.4
Nephritis and nephrosis	13.0	13.0	12.8	12.3	12.7
Pneumonia	22.2	17.5	19.7	15.7	15.3
Influenza	1.9	1.6	2.7	2.5	1.8
Ulcers of stomach and duodenum	5.4	5.4	4.9	4.4	4.3
Appendicitis	1.3	.8	1.0	1.5	1.8
Hernia and intestinal obstruction	4.3	3.9	4.6	4.1	4.2
Gastritis, duodenitis, enteritis, etc.	3.2	2.3	2.7	2.5	2.5
Cirrhosis of liver	13.0	10.4	11.0	9.1	9.3
Complications of pregnancy, childbirth	.9	1.7	2.2	1.5	1.8
Suicide	7.1	6.5	6.1	6.2	7.0
Homicide	3.0	2.6	2.9	2.5	3.1
Accidents—total	45.9	38.9	38.3	38.4	36.5
Motor vehicle	17.1	14.9	16.2	15.5	15.7
Home	9.1	8.5	8.3	6.8	7.5
Occupational	5.5	3.4	3.7	4.5	4.2
War deaths—enemy action	3.4	7.8	—	6.2	2.9
All other causes	79.0	74.5	84.2	67.1	57.1

*The rates for 1952 and 1951 are provisional.

Correspondence on the subjects discussed in these BULLETINS may be addressed to:

The Editor
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Metropolitan Life Insurance Company
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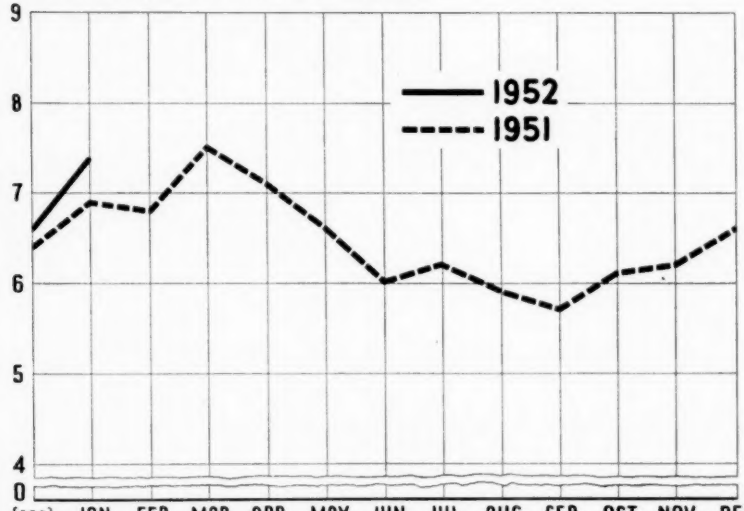
MORTALITY FROM ALL CAUSES

**METROPOLITAN LIFE INSURANCE COMPANY-INDUSTRIAL PREMIUM PAYING BUSINESS
WEEKLY AND MONTHLY COMBINED**

DEATH RATES PER 1,000 POLICYHOLDERS · ANNUAL BASIS



	(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1951		6.9	6.8	7.5	7.1	6.6	6.0	6.2	5.9	5.7	6.1	6.2	6.6
1952		7.4											

1951 and 1952 figures are provisional

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